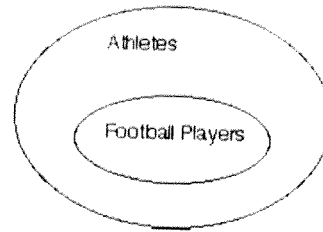


Geometry Midterm Exam Review

1. Choose the statement that best describes the Venn Diagram.

- a. All football players are athletes.
- b. Some football players are athletes.
- c. Athletes are not football players.
- d. All athletes are football players.



2. What is the converse of the statement "If an angle is a right angle, then it is equal to 90°" ?

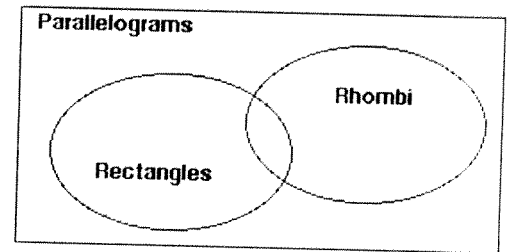
3. Given the statement "If I win, then you lose.", how is the statement "If I don't win, then you don't lose." related to it?

4. Given the statement "If it snows, then we don't go to school.", how is the statement "If we go to school, then it did not snow." related to it?

5. What is the contrapositive of the statement $p \rightarrow \sim q$?

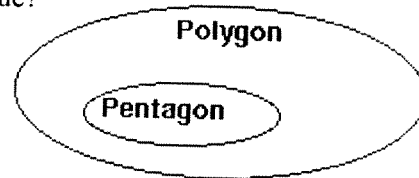
6. According to the diagram, which of the following is true?

- a. All parallelograms are either rectangles or rhombi.
- b. All parallelograms are both rectangles and rhombi.
- c. No parallelogram is both a rectangle and a rhombus.
- d. Some parallelograms are both a rectangle and a rhombus.



7. According to the diagram, which of the following is true?

- a. All polygons are pentagons.
- b. Polygons are not pentagons.
- c. All pentagons are polygons.
- d. Some pentagons are polygons.



8. Apply the Law of Syllogism to the following two sentences and make a conclusion
If I recycle my newspapers, then I contribute to saving a tree.
If I contribute to saving a tree, then I helped improve the quality of our air.

9. Given that M is the midpoint of segment XY, with X(-1, 2) and Y(6, -2), find the coordinates of M.

10. What is the slope of the line through (1, -8) and (5, 6)?

11. Given the points A(-12, 7) and B(1, 1), find the distance from A to B.

Geometry Midterm Exam Review

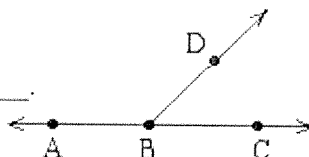
12. Find the distance from Z to L on the number line shown.



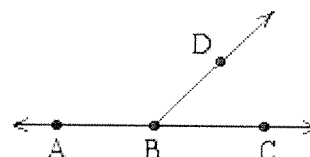
- a. 13 b. -14 c. 14 d. -12

13. If $\angle 1$ and $\angle 2$ are complementary angles, and the $m\angle 1 = 39^\circ$, then find $m\angle 2$.

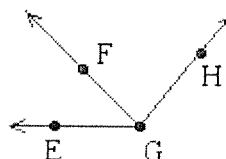
14. If $m\angle ABD = 132^\circ$, then $m\angle DBC = \underline{\hspace{2cm}}$.



15. If $m\angle ABD = 6x + 3$ and $m\angle DBC = 2x - 7$, then $m\angle ABD = \underline{\hspace{2cm}}$.

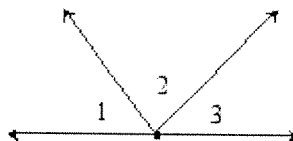


16. If $m\angle EGH = 120^\circ$ and $m\angle EGF = 54^\circ$, then $m\angle FGH = \underline{\hspace{2cm}}$.

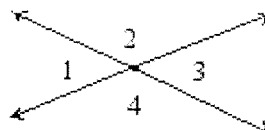


17. $\angle A$ is five times the size of its complement ($\angle B$). What is the measure of each angle?
 $m\angle A = \underline{\hspace{2cm}}$, $m\angle B = \underline{\hspace{2cm}}$

18. If $m\angle 1 = 46^\circ$ and $m\angle 3 = 42^\circ$, then $m\angle 2 = \underline{\hspace{2cm}}$.



19. If $m\angle 1 = 2x + 10$ and $m\angle 3 = 3x$, then $m\angle 1 = \underline{\hspace{2cm}}$



Use the figure below to answer the following question(s). $j \parallel k$ and $m \parallel n$

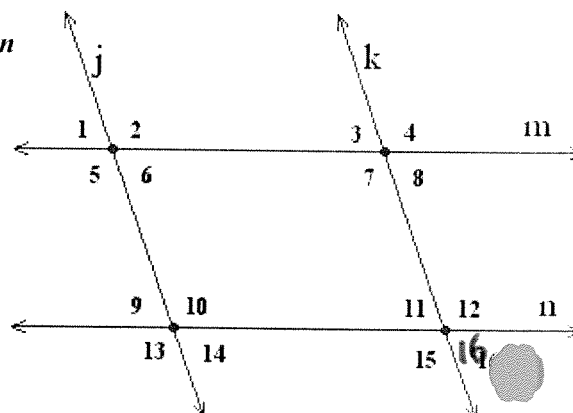
20. What is the relationship between $\angle 9$ and $\angle 11$?

- a. alternate interior b. alternate exterior
 c. corresponding d. same side interior (consecutive int)

21. If $\angle 5 = 112^\circ$, what is the $m\angle 10$?

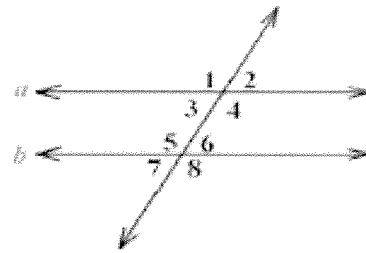
22. If $m\angle 3 = 69^\circ$, what is the $m\angle 16$?

23. If $m\angle 10 = 8x - 40$ and $m\angle 11 = 2x + 20$, what is x ?



Geometry Midterm Exam Review

Use the figure below to answer the following question(s).



24. Line a is parallel to line b if...

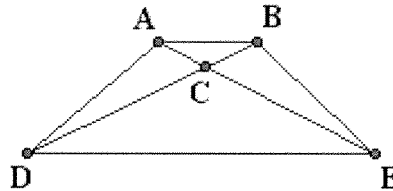
- a. $m\angle 1 = m\angle 4$ b. $m\angle 3 = m\angle 8$
c. $m\angle 5 = m\angle 3$ d. $m\angle 3 = m\angle 6$

25. What would be the value of x so $a \parallel b$ given $m\angle 4 = 6x + 11$ and $m\angle 6 = 4x - 1$?

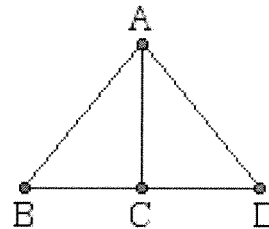
26. Find the slope of any line parallel to the line passing through $M(3,3)$ and $N(5,7)$.

27. Given: $\overline{AD} \cong \overline{BE}$
 $\overline{AE} \cong \overline{BD}$

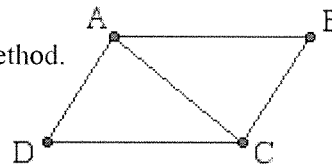
Which could be used to prove $\triangle ADE \cong \triangle BED$?



28. Given that $\overline{AC} \perp \overline{BD}$, name the missing piece of information needed to prove $\triangle ABC \cong \triangle ADC$ using the SAS method.



29. Given: $\overline{AB} \cong \overline{CD}$, name the missing piece of information needed to prove $\triangle ABC \cong \triangle CDA$ using the SSS method.



30. Jan is making a triangular garden with railroad posts. She has two posts that are 8 ft and 12 feet. Which of the following post lengths are not possible?

- a. 8 ft b. 4 ft. c. 19 ft d. 11 ft.

31. On a map, Richmond, Charlottesville, and Fredericksburg form a triangle. Richmond is 70 miles from Charlottesville and Fredericksburg is 60 miles from Richmond. Which is a possible distance between Fredericksburg and Charlottesville?

- a. 10 miles b. 80 miles c. 130 miles d. 200 miles